FanControl2 by joergm6 **Help V.2.4**
Download & Support: IHAD
Acknowledgments: diddsen, _marv_
Spaeleus(it), mimi74(fr), Bschaar(nl)

Apologies if the English translation is not always correct.

Works only with new drivers (2010) starting at Gemini 4.6 or other OE1.5/1.6 Images

Function

Automatic regulation of a 3pin or 4pin (PWM) fan.
Based on the average temperature from the 2 highest temperature values.
Slowly regulation, because temperatures do not change too quickly and there should be no unnecessary CPU load.

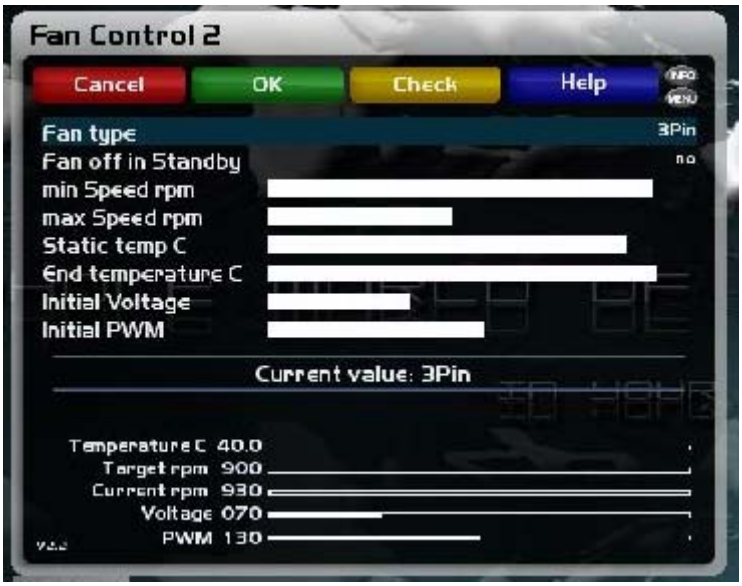
Security Features

If no fan speed is reported during 30 minutes, it is assumed that the fan is defective. Action in case of failure can be specified in the “Special Setup” (see below).

If during standby mode the fan is off, the fan will be activated when the maximum temperature is exceed. The fan turns off again if the temperature drops by more than 3°C below the maximum temperature.
The fan runs in the first 10 minutes with minimum speed.
The overheat protection can be increased by up to 9C (Special Setup).

Optimal settings

Users frequently ask for the optimal settings…. optimal = personal
➔ you have to test your setup and see which parameters match your requirements.
But some recommendations are in this document.



Preferences

Fan off in Standby
no = Fan is regulated while box is in standby
yes = Fan will be turned off if the box is in standby
yes, Except for recording or HDD = Fan is turned off in standby if there is no recording and HDD is in Idle-Mode

Min speed
At Temperature "static-temperature" and below this speed will be applied.

Recommended setting to start testing: 500 RPM

Max speed
At Temperature "end-temperature" this speed will be applied.

Recommendation: you should lower this value until you are satisfied with the noise level of the fan (at maximum speed – although it is possible this speed will never be reached).

Static temperature
Below this temperature the fan is not regulated, min speed is set.

Recommended setting to start testing: 42°C

End Temperature
This is the maximum temperature which may occur. Once this temperature is achieved, the max speed is applied.

Recommended setting to start testing: 50°C

Initially, voltage and PWM
These values are set when the box boots up or if the fan was switched off in standby.

Tip: this can be used to check the corresponding speed.
When changing these values the fan is immediately set with these values. The speed can now be seen in the infofield (RPM). The controlling is nevertheless once again active. So look quickly.

Tip: check the technical specifications of your fan

Recommended setting to start testing: set values to start at +- 1000 RPM

for 3pin Fan type
For regulating the voltage for a 3-pin fan with tachometer signal.
Is controlling only the voltage. Settings for PWM have no control.
The initial voltage is set at the start of the Box. From this starting speed the fan is regulated.

for 4pin Fan type
For regulating a PWM, 4-pin Fan.
First the PWM value is regulated. If the control range is no longer sufficient, also the voltage is regulated (if possible).
The voltage adjustment is required.

Tip:
Set the voltage on the Maximum value (for DM500HD set 5). But also a lower voltage level is useful. A lower voltage means a lower maximum speed and a lower minimum speed.
Choose the voltage in a way the control range with PWM is covering the regulation..
There are also fans spinning at PWM = 0 with a too high RPM. Reduce the voltage, until the desired min Speed (including 0 is possible) is achieved. Keep in mind the achievable max speed which will be lower.
The initial PWM value is set at the start of the Box. From this starting speed the fan is regulated.

for Fan type Control disabled
The regulation is disabled. The fan runs with the last parameters further.

Important: the fan is not turned off!

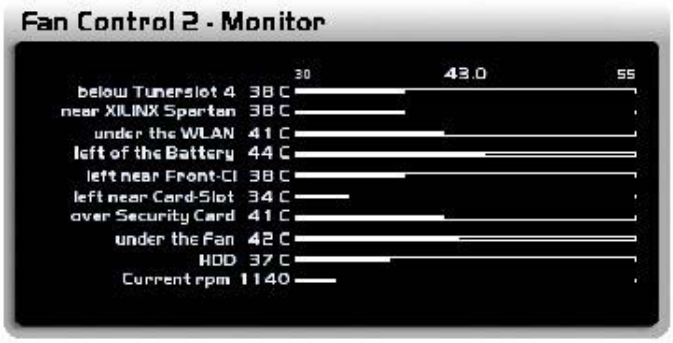
Check

This attempts to determine the minimum speed of the fan for the startup and the minimum before the fan stops.
Similarly, the maximum speed for these settings is determined.
The found values are an indication! Can be helpful for testing but are not obsolete.

(OK) means the found value matches the settings
(!!) means the found values do not match the settings.

These details are for information and do not affect the regulation.

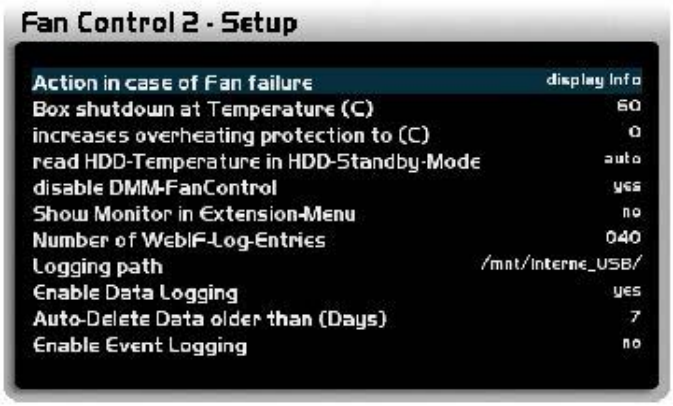
With 4Pin regulation addition information on the wider control range is also displayed.
That means the check with PWM also verifies the voltage range.



Temperature Monitor

With the "info key", the individual values of the temperatures and the actual RPM are shown.

The Temperature Monitor is also available in the Extention Menu (long press of Blue button)



Special Setup

With the "Menu key" special values can be defined.

Action in case of fan failure [show info]
Notification of defective fan, box shut down or do nothing.

Box shutdown at temperature (C) [65]
Upon reaching the specified temperature, the box switches off (DeepStandby).

Thermal protection increase at (C) [0]
If the fan is off in standby the fan switched on at maximum temperature. This maximum temperature can be increased by up to 9C

read HDD-Temperature in HDD-Standby-Mode [auto]
yes = read HDD temperature in HDD-Standby
no = read HDD temperature only when HDD is active
Auto = at the start of FC2 once tested whether the HDD starts when the temperature is read, and if so "no" is set

DMM fancontrol disabled [No]
Appears in the skins with temperature indication, the DMM-FanControl is active and also switches the fan. This causes unwanted on/off operations.
Recommendation: Disable DMM-FanControl

Show Monitor in Extension-Menu [No]
Show the temperature monitor in the Extension-Menu (long Blue Button)

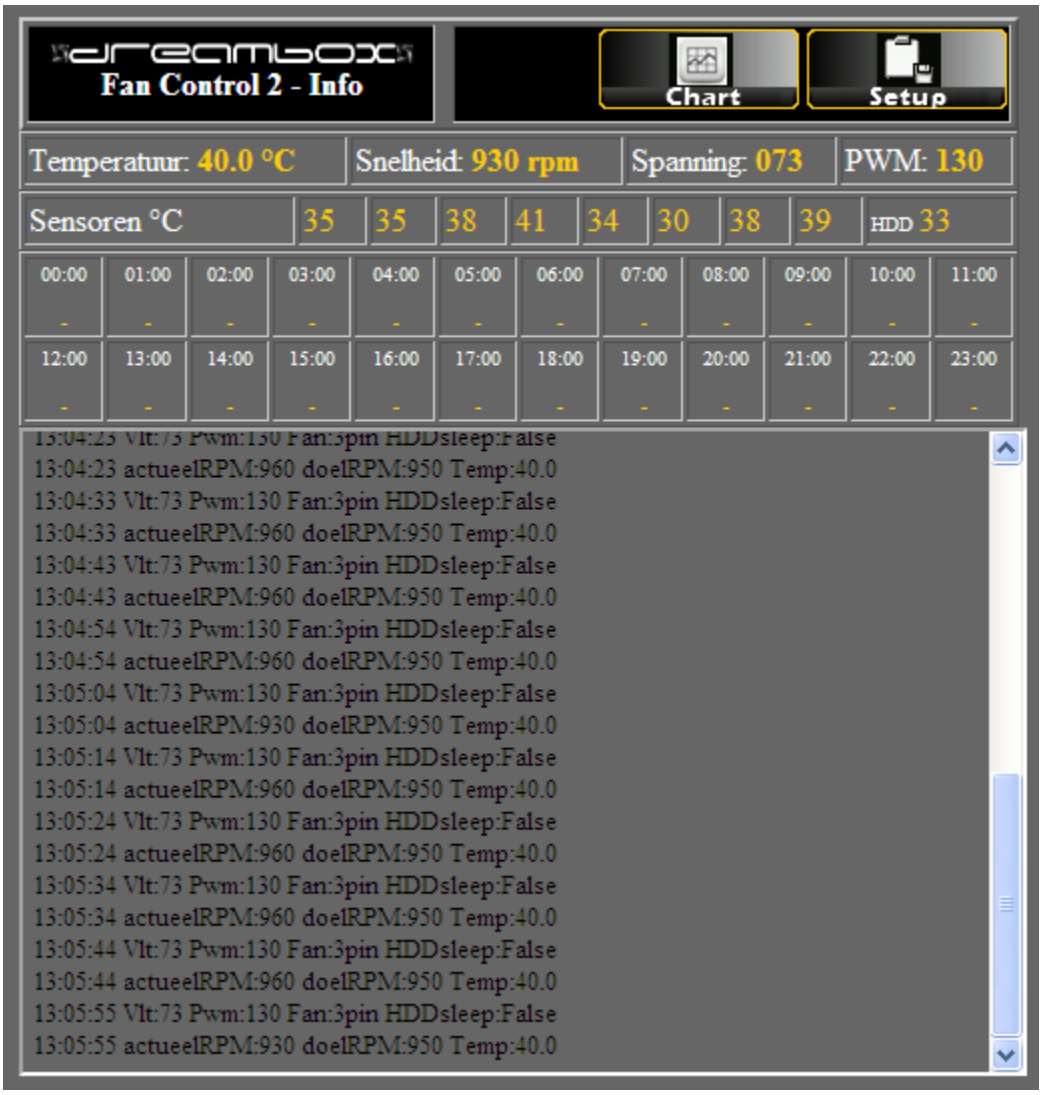
Number of WebIF-log entries [40]
How many events should be show in WebIF. 40-999

Logging directory
Choose the plath to which directory the log files are written.
Data is written only if least 10MByte are free.

Enable Data Logging
There will be written every minute a record in the file FC2data.csv.
This can called directly in Excel (from the webinterface). If this file does not exist and with Option enabled, a header is generated.
About 4kBytes each hour

Auto-Delete data older than (Days)
Automatic deleting the data from the logfile older than the specified days.
This action is performed at 00:00 and at start of the box.

Enable Event Logging
There will be written all Events in the file FC2events.txt.
About 30kByte each hour



Web Interface

Call: http://dreamboxip/fancontrol

Displays information about current fan-values and the last Event logs.
Per hour a value for temperature and Speed is appears.

With "Setup", the log files can be downloaded and the logging can be set.

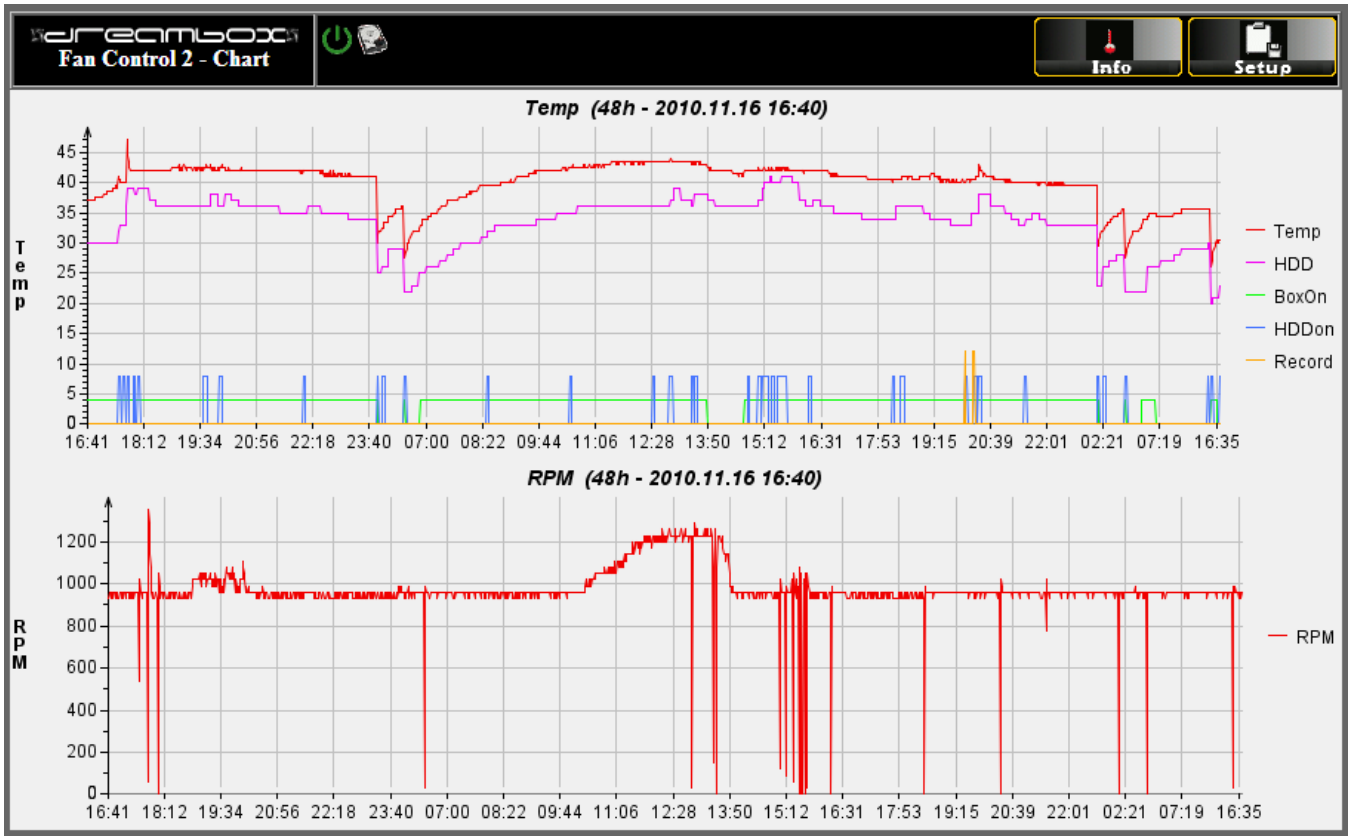
Especially the Data Logging can be interesting to check the result of your settings.

What can be analyzed in the logging:

-min / max RPM with corresponding PWM and Voltage
-temperature evolution (standby / active / HD-usage / ….)

Tip: also during standby the webinterface can be consulted to check the temperatures.

A new feature in the web interface is the FC2 Chart.
The log data from the last 48 hours are visualized in a graphic way.



NEW:
Since V2.4 the graph show also the “Box status” of the last 48h.

-BoxOn: box is active
-HDDon: hard disk is spinning
-Record: box is recording

In the header of the web interface the current status is also displayed with 3 different icons. (in this example the “geen power icon” (Box is on) and the “HDD icon” (HSS on).

Remark:
When using Firefox the display might be empty, a refresh (F5) of the page resolves this specific issue.

Miscellaneous

All important parameters for the fan current readings appear as a value and bar graph. The bar display range is based on the individually set parameters.

FanControl2 is prepared for different languages.
Currently, English (default), German, Italian, French
POT file is in the ipkg if anyone wants to make other languages available.

The settings are stored in the normal Enigma2 settings and are therefore included in the backup / restore.